动 物 学 研 究 1999, Feb. 20 (1): 55~57 CN 53-1040/Q ISSN 0254-5853
Zoological Research

TWO NEW SPRINGTAILS FROM SHANGHAI, CHINA (Collembola: Isotomidae)

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Abstract Two new species of Isotomidae from Shanghai are described. Genus *Tetracanthura* Martynova, 1971 is a new record to China, and genus *Uzelia* Absolon, 1901 has been mentioned by Zhao (1992).

Key words Collembola, New species, Shanghai

1 *Tetracanthura sinensis* sp. nov. (Fig.1)

Body length of this new species is 525 μm. Color dull grayish. Antennae sub-equal to the length of the head. And their segmental ratio nearly as 10:13:13:23, they are 19.7, 25.6, 25.6, 45.3 μm respectively. Sense organ of the third antennal segment consists of two small sensory rods and two defensive setae. There are about 10-11 blunt sensory setae and one pine setae on the fourth antennal segment. Eyes eight on each side, sub-equal to each other in diameter situating upon black patches; showing the tendency of separating into two groups, first group include 5 and second group 3 eyes. Postantennal organ broad elliptical, is about the same size as the diameter of an adjacent eye. Th. Ⅱ, Ⅲ are 78.8 and 70.9 μm in length separately. Abd. Ⅰ, Ⅱ, Ⅲ, Ⅳ, Ⅴ, Ⅵ are 39.4, 51.2, 49.2, 51.2, 36.5, 21.7 μm in length respectively. Second, third and fourth abdominal tergits sub-equally long. Two pairs of slightly curing anal spines are located upon intermittent papillae. Anterior pair quite same with posterior ones in form, but slightly smaller than the later, Sixth abdominal segment separated from the fifth distinctly. Unguis stout, undentated. Unguiculus of foreleg about one third of the unguis, and about two third of the unguis of the hind-leg, unguiculus are lanceolate and acuminate. Rami of tenaculum quadridentate. Furcula very distinct, the length ratio of manubrium, dens and mucro is nearly 7:13:1. Dens dorsally crenulate and curving upward. Mucro not very distinct but discernible from dens, mucro is bidentate.

Remarks: This new species is closely related to *T. mirabilis*, but can be easily separated from it by the hind claw, unguis undentated, and dens dorsally deeply crenulated. Mucro of this species is bidentate, but tridentate in *T. mirabilis*.

Locality: Shanghai Botanical Garden, Shanghai, China.

2 *Uzelia anommatos* sp. nov. (Fig.2)

Body length 600 μm, without pigment. Antenna a little longer than head, and their segmental ratio nearly as 10:13:15:22, they are 19.7, 25.6, 29.6, 43.3 μm respectively. Sense organ of the third antennal segment consists of two sensory rods. There are a larger sensory rod and a smaller one on the first segment, and a sensory rod on the second segment, about 7 blunt sensory setae on the fourth. No eyes on the head, Postantennal organ elliptical, slightly notched at the middle of the fore margin and its width about one fourth of the length. Th. Ⅱ, Ⅲ are 96.5 and 76.8 μm in length respectively. Abd. Ⅰ, Ⅱ, Ⅲ, Ⅳ, Ⅴ + Ⅵ are 61.1, 59.1, 63.6, 76.8, 39.4 μm respectively. First, second and third abdominal tergits subequaly in length. One pair of anal spines is located on intermittent papillae. Sixth abdominal segment ankylosed with the fifth, where some long stiff hairs present, and some of them extend backwardly beyond the end of the abdomen, but they are never clavate apically. There are two sensory rods on each side of the last abdominal segment. Unguis stout, undentated, unguiculus very slender, acuminate and also undentated, about one third of the ungius. Ventral tube with 4+4 setae. Without tenaculum and furcula. Chaetotaxy of dorsal

本文 1998-04-28 收到, 1998-09-07 修回

and ventral side of each segment are shown in Fig. 2, D and E.

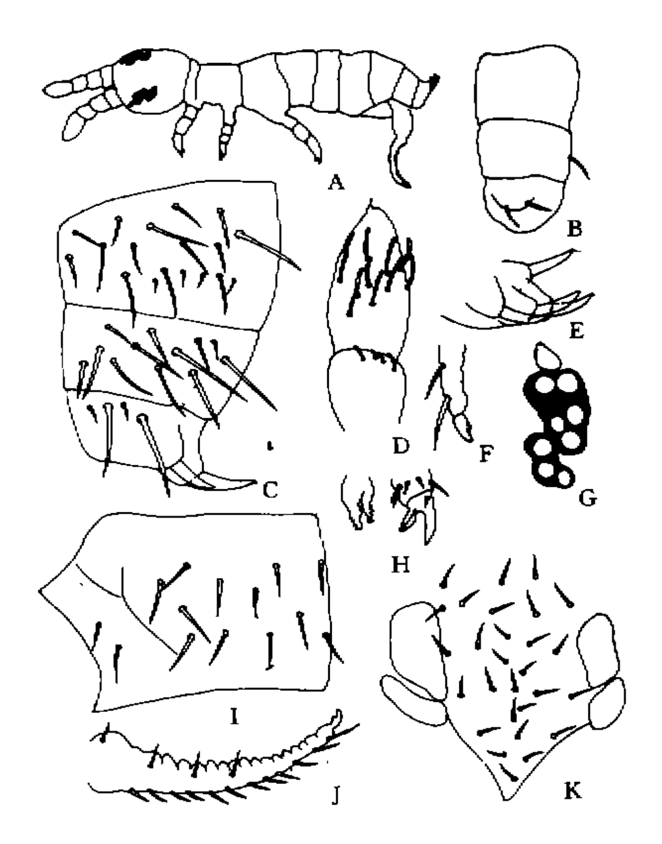


Fig. 1 *Tetracanthura sinensis*, sp. nov.

A. Habitus; B. Ventral tube; C. Chaetal arrangement of Ⅳ ~ Ⅵ abdominal segments (lateral view); D. Sensory rods and defensive setae on third segment, pine setae and sensory setae on fourth segment of ant; E. Anal spines; F. Mucro and distal part of dens; G. Eyes and post antennal organ; H. Tenaculum and hind foot; I. Chaetal arrangement of Th. Ⅲ (lateral view); J. Dens and mucro; K. Chaetal arrangement between two eyes patches.

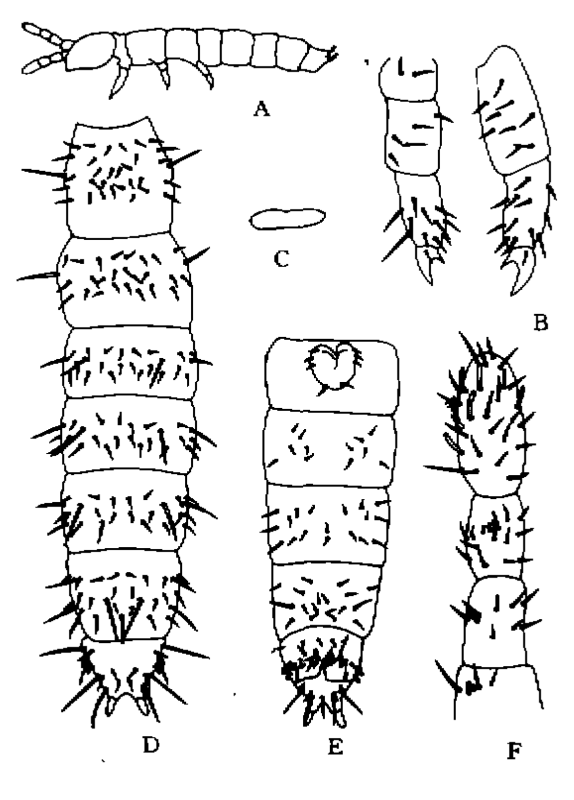


Fig. 2 *Uzelia anommatos* sp. nov.

A. Habitus; B. Fore and hind legs; C. Post antennal organ; D. Dorsal chaetal arrangement of Th. Ⅰ ~ Abd. Ⅵ; E. Ventral chaetal arrangement of Abd. Ⅰ ~ Ⅵ; F. Antenna.

Remarks: This new species, no color, without eye, and with distinct unguiculus, can be very easily distinguished from other species of this genus.

Locality: Shanghai Botanical Garden, Shanghai, China.

All the Holotypes of these two species are deposited in the museum of Shanghai Institute of Entomology.

References

Martynova E F, 1971. New species of springtails (Collembola) from mountain and steppe region of the USSR. *Revue d'Entomologie de l'URSS*, **50**(3): 598 – 611.

Yosii R, 1961a. Cryophilous species of the Niigata prefecture Ⅱ, Collembola (in Japanese), *Bull. Nagaoka Mun. Sci. Mus.*, 2: 7 – 13.

Yosii R, 1961b. Cryophilous species of the Niigata prefecture, studies on Japanese Collembola Ⅶ. *Bull. Nagaoka Mun. Sci. Mus.*, 2: 14 – 19.

Zhao L, 1992. Collembola. In: Yin W. y. ed. Subtropical soil animal of China, Beijing: Science Press. 414 – 457 (in Chinese).



上海地区䖴两新种
（弹尾目：等节䖴科）

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摘　要　本文描述了等节䖴科的两新种，中华尾四刺䖴 *Tetracanthura sinensis* sp. nov. 和缺眼二刺䖴 *Uzelia anommatos* sp. nov.。其中 *Tetracanthura* Martynova 1971 为中国新记录属。

关键词　弹尾目，新种，上海
中图分类号　Q969.14

新书评介

华章昭后世　　字字留珠玑

《施立明文集》正式出版

中国科学院院士，我国著名细胞遗传学家施立明先生不幸英年早逝。在他年仅55岁的生命历程中，却取得了令世人瞩目的科学成就。他的同事和学生们对他生前留下的研究论文进行了认真地筛选和整理，编辑成《施立明文集》一册，最近已由科学出版社正式出版。

这是施立明先生一生科学成就的总结。全书集中了先生有代表性的研究论文75篇，其中中文52篇，英文23篇，计60余万字。在时间跨度上，从1976年到1995年，涵盖了近20年的研究工作。从内容上可以划分为3个部分：

一是1980年以前的研究工作，主要为辐射细胞遗传学的内容。尤其是以细胞遗传学的技术和方法，定性定量评价辐射防护药物的研究最为引人瞩目。在这些文章中，关于实验动物模型的建立、实验技术和方法的改进，以及整体给药、离体照射技术的应用，以外周淋巴细胞染色体畸变作为辐射防护药定量评价指标等新思路的提出，解决了不可能以正常人体进行辐射实验的重大难题，为我国国防医学中抗辐射药物的筛选研究提供了新技术和新方法。这是一项开创性的工作。该项研究曾获得1978年全国科学大会奖。

二是1981年至1990年以前的研究工作。这期间主要是以哺乳动物、特别是以麂属动物为研究对象，开展细胞分类学和染色体核型进化研究。这是先生研究工作的黄金阶段，提出了一系列开创性的创新理论：通过对赤麂、小麂及其杂种的比较细胞遗传学分析，提出串联易位和罗伯逊融合是麂属核型进化的主要机制，这对研究哺乳动物染色体进化和物种形成具有重要价值。美国科学家 Barbara McClintock 博士在接受诺贝尔奖的演说中曾引用了这一学术观点。此外，这一时期先生在遗传毒理学、减数分裂特别是联会复合体的研究等方面也多有建树和创新。

三是进入90年代以后的研究工作。先生结合国际上遗传学、进化生物学、细胞生物学和分子生物学研究的新进展，立足于我国西南地区丰富的动物资源，开展以细胞与分子进化为主要内容的进化生物学研究。从珍稀濒危动物到特有家禽家畜品种，他和他的同事、学生们共同努力，不断进取，取得了丰硕的成果。从细胞与分子两个层次研究动物的系统与演化，解决了灵长类、偶蹄类、食肉类和果蝇等动物类群分类与系统演化中的疑难问题；对家养动物地方品种的起源与遗传多样性研究，为家养动物资源的持续利用奠定了基础；倡导并开展珍稀、濒危动物的保护遗传学研究，为经济有效地保护大熊猫、金丝猴等珍贵物种提供了科学依据。上述工作推动了我国进化生物学和保护生物学的发展，并先后获得中国科学院自然科学一等奖、云南省自然科学一等奖等奖励。

施立明先生是一个才华横溢的科学工作者。他的过早的辞世，给人们留下了太多的遗憾。但愿本书的出版能给科学园地增添一簇新绿，使之成为活着的人们，特别是青年一代藉以攀登新的科学高峰的阶梯。

《施立明文集》为16开本漆布精装，科学出版社出版。书号：ISBN　7－03－006478－X/Q.774，定价：￥68.00元。欲购者可与《动物学研究》编辑部联系。地址：昆明市教场东路32号，中国科学院昆明动物研究所内，邮政编码：650223，电话：（0871）5199026。

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